IN THE CLAIMS:

Please cancel Claims 8 - 12, 14 - 20, 24 - 25, 28 - 31, and 33. Please amend multiple dependent Claim 32/28, 32/29 and 32/30, and Claim 34 as follows. Claim 32/28 has been amended to be independent. Claim 32/29 is now independent Claim 35. Claim 32/30 is now independent Claim 36.

1. - 31. (Cancelled)

32. (Currently Amended) A method of creating an aluminum oxide protective film on ~~the~~ a surface of a high purity aluminum alloy, comprising:

providing an aluminum alloy, wherein said alloy includes mobile impurities present at the following concentrations, magnesium at a concentration ranging from about 3.5 weight % to 4.0 weight %, silicon at a concentration ranging from 0 weight % to 0.03 weight %, iron at a concentration ranging from about 0 weight % to 0.03 weight %, copper at a concentration ranging from about 0.02 weight % to 0.07 weight %, manganese at a concentration ranging from about 0.005 weight % to 0.015 weight %, zinc at a concentration ranging from about 0.08 weight % to 0.16 weight %, chromium at a concentration ranging from about 0.02 weight % to 0.07 weight %, titanium at a concentration ranging from 0 weight % to 0.01 weight %, with individual other impurities limited to 0 weight % to 0.03 weight % each ~~A method in accordance with Claim 28, or Claim 29, or Claim 30~~, wherein mobile impurity particulates present in said high purity aluminum alloy are limited so that at least 95 % of all particles have a particle size of less than 5 μm, no more than 5 % of said particles have a particle size ranging between 20 μm and 5 μm, and no more than 0.2 % of said particles have a particle size ranging between 50 μm and 20 μm ; and

exposing said surface of said aluminum alloy to an electrolytic oxidation process during which said surface is immersed as an anode in an acid electrolyte, with a cathode comprised of

an aluminum alloy, and wherein a DC current is applied, wherein said acid electrolyte is a water-based solution comprising 10 % to 20 % by weight sulfuric acid and about 0.5 % to 3.0 % by weight oxalic acid, wherein said protective film is created at a temperature ranging from about 5 °C to about 25 °C, and wherein an applied current density of said DC current ranges from 5 A/ft^2 to 36 A/ft^2.

33. (Cancelled)

34. (Currently Amended) A method in accordance with Claim 32 or Claim 35, or Claim 36, wherein, prior to creating said aluminum oxide protective film on said high purity aluminum alloy surface, said aluminum alloy is heat treated to relieve stress and increase hardness, wherein said heat treatment is carried out at a temperature of 330°C or at a lower temperature.

35. (New) A method of creating an aluminum oxide protective film on a surface of a high purity aluminum alloy, comprising:

providing an aluminum alloy, wherein said alloy includes mobile impurities present at the following concentrations, magnesium at a concentration ranging from about 3.5 weight % to 4.0 weight %, silicon at a concentration ranging from 0 weight % to 0.03 weight %, iron at a concentration ranging from about 0 weight % to 0.03 weight %, copper at a concentration ranging from about 0.02 weight % to 0.07 weight %, manganese at a concentration ranging from about 0.005 weight % to 0.015 weight %, zinc at a concentration ranging from about 0.08 weight % to 0.16 weight %, chromium at a concentration ranging from about 0.02 weight % to 0.07 weight %, titanium at a concentration ranging from 0 weight % to 0.01 weight %, with individual other impurities limited to 0 weight % to 0.03 weight % each, wherein mobile impurity particulates present in said high purity aluminum alloy are limited so that at least 95 % of all particles have a particle size of less than 5 μm, no more than 5 % of said particles have a

particle size ranging between 20 μm and 5 μm, and no more than 0.2 % of said particles have a particle size ranging between 50 μm and 20 μm ;

contacting said surface with an acidic solution which includes about 60 % to 90 % by weight of technical grade phosphoric acid, having a specific gravity of about 1.7, and including about 1 % to about 3 % by weight of nitric acid, wherein said cleaning is carried out with said aluminum alloy surface at a temperature in the range of about 100 °C, for a time period ranging from about 30 seconds to about 120 seconds; and

exposing said surface of said aluminum alloy to an electrolytic oxidation process during which said surface is immersed as an anode in an acid electrolyte, with a cathode comprised of an aluminum alloy, and wherein a DC current is applied, wherein said acid electrolyte is a water-based solution comprising 10 % to 20 % by weight sulfuric acid and about 0.5 % to 3.0 % by weight oxalic acid, wherein said protective film is created at a temperature ranging from about 5 °C to about 25 °C, and wherein an applied current density of said DC current ranges from 5 A/ft^2 to 36 A/ft^2.

36. (New) A method of creating an aluminum oxide protective film on a surface of a high purity aluminum alloy, comprising:

providing an aluminum alloy, wherein said alloy includes mobile impurities present at the following concentrations, magnesium at a concentration ranging from about 3.5 weight % to 4.0 weight %, silicon at a concentration ranging from 0 weight % to 0.03 weight %, iron at a concentration ranging from about 0 weight % to 0.03 weight %, copper at a concentration ranging from about 0.02 weight % to 0.07 weight %, manganese at a concentration ranging from about 0.005 weight % to 0.015 weight %, zinc at a concentration ranging from about 0.08 weight % to 0.16 weight %, chromium at a concentration ranging from about 0.02 weight % to 0.07 weight %, titanium at a concentration ranging from 0 weight % to 0.01 weight %, with individual other impurities limited to 0 weight % to 0.03 weight % each, wherein mobile

impurity particulates present in said high purity aluminum alloy are limited so that at least 95 % of all particles have a particle size of less than 5 μm, no more than 5 % of said particles have a particle size ranging between 20 μm and 5 μm, and no more than 0.2 % of said particles have a particle size ranging between 50 μm and 20 μm ;

contacting said surface with an acidic solution which includes about 60 % to 90 % by weight of technical grade phosphoric acid, having a specific gravity of about 1.7, and including about 1 % to 3 % by weight of nitric acid, wherein said cleaning is carried out with said aluminum alloy surface at a temperature in the range of about 100 °C, for a time period ranging from about 30 seconds to about 120 seconds;

rinsing said surface with a deionized water rinse, and;

exposing said surface of said aluminum alloy to an electrolytic oxidation process during which said surface is immersed as an anode in an acid electrolyte, with a cathode comprised of an aluminum alloy, and wherein a DC current is applied, wherein said acid electrolyte is a water-based solution comprising 10 % to 20 % by weight sulfuric acid and about 0.5 % to 3.0 % by weight oxalic acid, wherein said protective film is created at a temperature ranging from about 5 °C to about 25 °C; and wherein an applied current density of said DC current ranges from 5 A/ft^2 to 36 A/ft^2.